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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,473

04/29/2005

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EXAMINER

LOONAN, ERIC T

ART UNIT

PAPER NUMBER

2189

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,473	Applicant(s) FUENTE ET AL.	
	Examiner ERIC LOONAN	Art Unit 2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7 and 19-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7 and 22-29 is/are rejected.
- 7) ☒ Claim(s) 19-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is based on application 10/533,473 filed 29 April 2005. **Claims 7 and 19-29** are currently pending and have been considered below.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 January 2009 has been entered.

Claim Objections

1. **Claim 7** is objected to because of the following informalities: the limitation "within said storage system" is repeated on lines 6 and 7. Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22-29 are rejected under 35 U.S.C. § 101 because the claims fail to place the invention squarely within one statutory class of invention. At [0045] of the instant specification, applicant has provided evidence that applicant intends the "computer readable medium" to include signals. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore this

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claim(s) is/are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter. The Examiner suggests for the claim limitations in **Claims 22-25** to be amended to state "computer storage medium" (supported by [0044]) or "tangible medium" (supported by [0045]) to differentiate between storage and signal carrying media. **Claims 26-29** deploy the usage of means-plus-function language, thus the claims are presumed to invoke 35 U.S.C. § 112, 6th paragraph. **Claims 26-29** are rejected under 35 U.S.C. § 101 since an embodiment of the claimed structure is drawn to a computer program product implemented on a non-statutory medium (as supported in [0045]).

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. **Claims 7, 22, and 26** are rejected on the ground of nonstatutory double patenting over claim 1 of U. S. Patent No. 7,401,081 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

US Patent 7,401,081 Claim 1	Application 10/533,473 Claim 7
A method for providing control on metadata within a network of storage controllers, said method comprising:	A method for performing lock management for a flash copy in a shared storage system, said method comprising:
designating one of said storage controllers as an owner storage controller, wherein said owner storage controller owns metadata controlling all input/output (I/O) operations associated with a region of storage; designating remaining of said storage controllers as client storage controllers; in response to an I/O request to one of said client storage controllers, suspending said I/O request by said one client storage controller;	storing a copy of data structure defining a coherency relationship between a region of data and a flash copy image of said region of data within a cache of said shared storage system, wherein said data structure is subject to one or more lock protocols controlled by an owner storage controller node within said shared storage system within said shared storage system,
determining by said owner storage controller, whether or not said region of storage has already been copied;	wherein said data structure includes a previous positive confirmation that said region of data a flash copy associated with said flash copy image of said region of data are consistent;
in a determination that said region of storage has been copied, unpending said I/O request by said one client storage controller to process said I/O request; and in a determination that said region of storage has not been copied, placing a lock record against said metadata associated with said region of storage; copying data within said region of storage by said owner storage controller; and releasing said lock record to process said I/O request.	receiving a request to perform an input/output operation on at least one of said region of data and said flash copy image of said region of data at a client storage controller node within said shared storage system; and performing said input/output operation at an input/output performing component of said client storage controller node utilizing said copy of data structure.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Allowable Subject Matter

5. **Claims 7 and 19-29** are found to be allowed over prior art.

Response to Arguments

Applicant's remarks submitted 21 January 2009 in response to Office Action mailed 6 August 2008 have been fully considered, but are considered moot based on new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC LOONAN whose telephone number is (571)272-6994. The examiner can normally be reached on Monday-Friday, 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon can be reached on (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric Loonan/
Examiner, Art Unit 2189

/Kevin L Ellis/
Acting SPE of Art Unit 2187